

Engage, Encourage, and Enable Health and Science Exploration through Literacy: Free Resources from the National Library of Medicine

Lydia N. Collins
Consumer Health Coordinator
LYDIA@PITT.EDU



NLM Health Outreach

“The National Library of Medicine (NLM), on the campus of the National Institutes of Health in Bethesda, Maryland, has been a center of information innovation since its founding in 1836.



U.S. National Library of Medicine



In addition, the Library coordinates a 6,000-member National Network of Libraries of Medicine that promotes and provides access to health information in communities across the United States.”

[URL](#) for the National Library of Medicine



Note: We cannot answer questions about individual medical cases, provide second opinions or make specific recommendations about therapy. Those issues should be discussed with your healthcare provider.

Locate Your NN/LM Office

8 Regional Offices

**Support Network members to achieve
NN/LM mission**

5-year contracts



Mission

Provide K-12 educators, public library staff, health professionals, and the general public with equal access to and training on health and science resources

Join the NN/LM Network

[URL](#) to locate your Regional Medical Library

NLM K-12 Science and Health Education Topics

Biology

Careers

**Environmental Health
Science/Chemistry**

Forensics and Medical Technology

General Health

Genetics





General Health

[Health Topics](#)

[Drugs & Supplements](#)

[Videos & Tools](#)

[Español](#)



Health Topics

Find information on health, wellness, disorders and conditions



Drugs & Supplements

Learn about prescription drugs, over-the-counter medicines, herbs, and supplements



Videos & Tools

Discover tutorials, health and surgery videos, games, and quizzes



Medical Encyclopedia

Articles and images for diseases, symptoms, tests, treatments

Medical Dictionary from Merriam-Webster

Look up in Dictionary

GO



Trusted health information from any device

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Today's Health News

[Most Americans Waste More Food Than They Know](#)

[Popular Heartburn Meds Linked to Higher Risk of Heart Attack](#)

[Woman Gives Birth Using Ovary Tissue Frozen in Childhood](#)

[More health news](#)

Clinical Trials

Search [ClinicalTrials.gov](#) for drug and treatment studies.

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NIH MedlinePlus Magazine

Read the **latest issue**



[URL](#) for MedlinePlus



Anatomy



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Multimedia & Tools

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- [Tutorials](#)
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Research

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Reference Shelf

- No links available

For You

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Summary

Anatomy is the science that studies the structure of the body. On this page, you'll find links to descriptions and pictures of the human body's parts and organ systems from head to toe.

Start Here

- [Anatomy & Physiology](#) (National Cancer Institute)
- [Body Basics](#) (Nemours Foundation)
- [Introduction to the Human Body](#) (National Cancer Institute)
- [Visible Human Project](#) (National Library of Medicine)

Specific Conditions

- [Anatomy of the Heart](#) (National Heart, Lung, and Blood Institute)
- [Brain Basics](#) (National Institute of Mental Health)
- [Classification & Structure of Blood Vessels](#) (National Cancer Institute)
- [Components of the Lymphatic System](#) (National Cancer Institute)
- [Endocrine System \(For Parents\)](#) (Nemours Foundation)
Available in Spanish

Get Anatomy updates by email

**GO**

MedlinePlus links to health information from the National Institutes of Health and other federal government agencies. MedlinePlus also links to health information from non-government Web sites. See our [disclaimer](#) about external links and our [quality guidelines](#).

Search MedlinePlus for subjects to locate health topic pages

Latest Health News



Health news from HealthDay, plus recent press announcements from major medical organizations.

[More health news by date](#) [Health news by topic](#)

Monday, June 15

[ADHD and School Performance](#) (HealthDay)

Related MedlinePlus Topics: [Attention Deficit Hyperactivity Disorder](#), [School Health](#)

Sunday, June 14

[FDA Approves Brain Stimulation Device for Parkinson's Disease](#)

(HealthDay)

Brio Neurostimulation System is second such device approved for tremor disorders

Related MedlinePlus Topics: [Parkinson's Disease](#), [Tremor](#)

[FDA Ban on Harmful Trans Fats Expected Soon](#) (HealthDay)

Food companies will likely need to petition government before using partially hydrogenated oils

Related MedlinePlus Topics: [Cholesterol](#), [Dietary Fats](#), [Nutrition](#)

Saturday, June 13

[Chamomile Tea Tied to Longer Lives for Mexican-American Women](#)

(HealthDay)

But study did not determine how much was consumed, and only found an association, not cause-and-effect link

Related MedlinePlus Topics: [Herbal Medicine](#), [Hispanic American Health](#)

Get the latest health news by email 

GO

Today's Health News Video: **ADHD and School Performance**

Monday, June 15

[Transcript](#)



For closed captioning, click the CC button on the lower right-hand corner of the player. [Video player keyboard shortcuts](#)

[URL](#) for MedlinePlus Health News

[Teens Home](#)[Body](#)[Mind](#)[Sexual Health](#)[Food & Fitness](#)[Diseases & Conditions](#)[Infections](#)[Q&A](#)[School & Jobs](#)[Drugs & Alcohol](#)[Staying Safe](#)[Recipes](#)[Español](#)

BODY BASICS

[KidsHealth](#) > [Teens](#) > [Body](#) > [Body Basics Library](#) > [About the Body Basics Library](#)

AAA
Text Size  Print

Did you ever wonder what all those complex body systems do? These Body Basics articles explain just how each body system, part, and process works. Use this medical library to find out about basic human anatomy, how it all functions, and what happens when things go wrong.

[Blood](#)
[Bones, Muscles, and Joints](#)
[Brain and Nervous System](#)
[Digestive System](#)
[Endocrine System](#)
[Eyes](#)
[Female Reproductive System](#)
[Heart and Circulatory System](#)
[Immune System](#)
[Kidneys and Urinary Tract](#)
[Lungs and Respiratory System](#)
[Male Reproductive System](#)

[URL](#) for TeensHealth Body Basics

[Home](#) » [Body](#) » [Understanding your body](#) » Inside your body

Body:

Understanding your body

Inside your body

Your reproductive health

Puberty

Getting your period

Getting enough sleep

Looking and feeling your best

Fighting germs

Your sexuality

Seeing the doctor

Quizzes

Links to more information on girls' bodies

girlshealth glossary

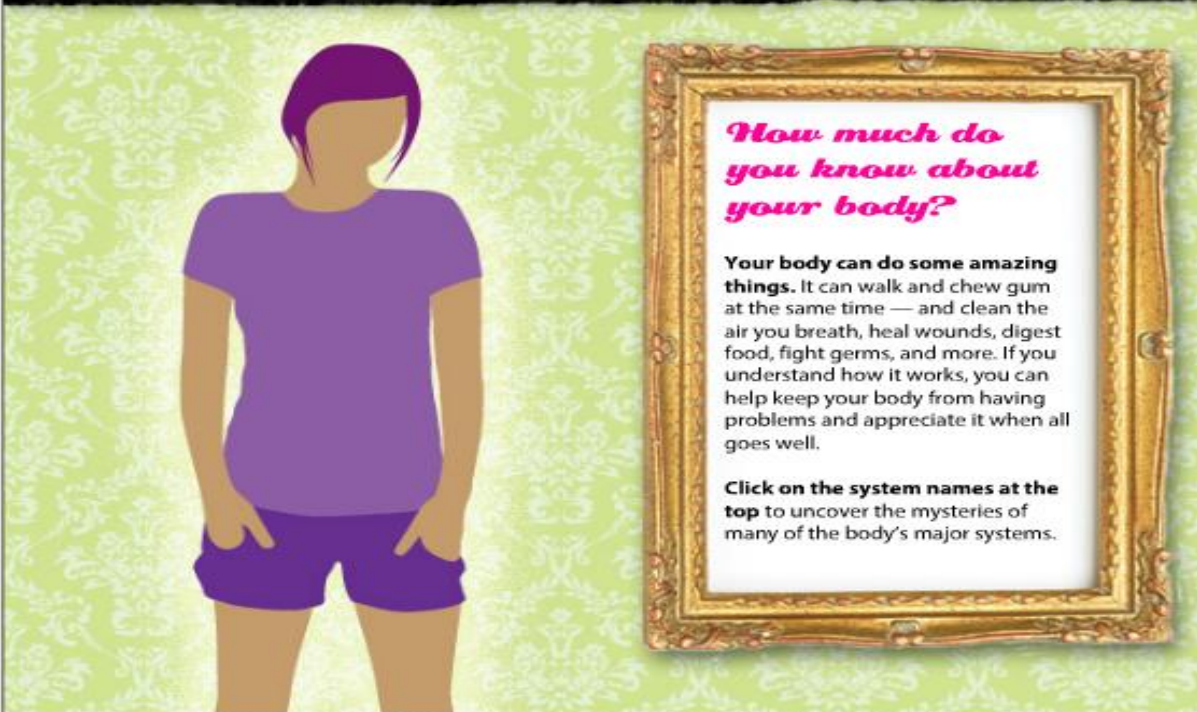
girlshealth.gov home

Inside your body

Your body is fantastic! It's a great idea to learn how your body works. That way, you can help protect it from problems and appreciate it when all goes well.

What are the major systems of your body? Check them out here.

{Circulatory} {Musculoskeletal} {Nervous} {Digestive} {Respiratory} {Endocrine} {Reproductive}



How much do you know about your body?

Your body can do some amazing things. It can walk and chew gum at the same time — and clean the air you breath, heal wounds, digest food, fight germs, and more. If you understand how it works, you can help keep your body from having problems and appreciate it when all goes well.

Click on the system names at the top to uncover the mysteries of many of the body's major systems.

(If the tool above does not appear, please take a look at our [text version of this tool](#).

Viewing the above requires the [Adobe Flash Player](#) (.)

[URL](#) for Inside Your Body

Behind the Headlines



Fact or fiction? Your guide to the science behind health stories in the news

Featured UK headline analysis

Could Testing Grip Strength Predict Heart Disease Risk?

15 May 2015



"Poor grip can signal chances of major illness or premature death," the Mail Online reports. An international study has provided evidence that assessing grip strength could help identify people who were at higher risk of cardiovascular incidents such as a heart attack. The study

authors wanted to see whether muscle strength, measured by grip, can predict the chances of getting a range of illnesses, and of dying, in high-, medium- and low-income countries. To find out, they tested 142,861 people across 17 countries and tracked what happened to them over the course of four years....[more](#)

Previously featured

Previously featured headline analysis

[Children and Heart Disease Risk Factors](#)

03-18-2015



"Children are suffering damage to their hearts as early as 12 due to poor diets," the Mail Online reports. A US study has found high levels of known risk factors for heart disease in children. The study has not shown the direct effect these risks have in this age group, but it has raised concerns that they may affect the heart from

The study looked at four related risk factors known to

In the US

Grip Strength May Predict Heart Attacks and Strokes

The New York Times

Grip strength may be a good predictor of the risk for cardiovascular disease....[more](#)

Related Info

Want to know more about resistance or strength training?

PubMed Health

Check out evidence on the effects of resistance training for different groups of people....[more](#)

NHS behind the headlines

From the National Health Service in England

[Half a handful of nuts a day 'reduces early death risk'](#)

[Marriage health claims are inconclusive](#)

[Could brain-eating cannibals provide the key to treating CJD?](#)

[Facebook and Twitter could be used to help people quit smoking](#)

[Does your birthday affect your disease risk?](#)

Further Reading




[How to read health news](#)

[About Behind the Headlines](#)

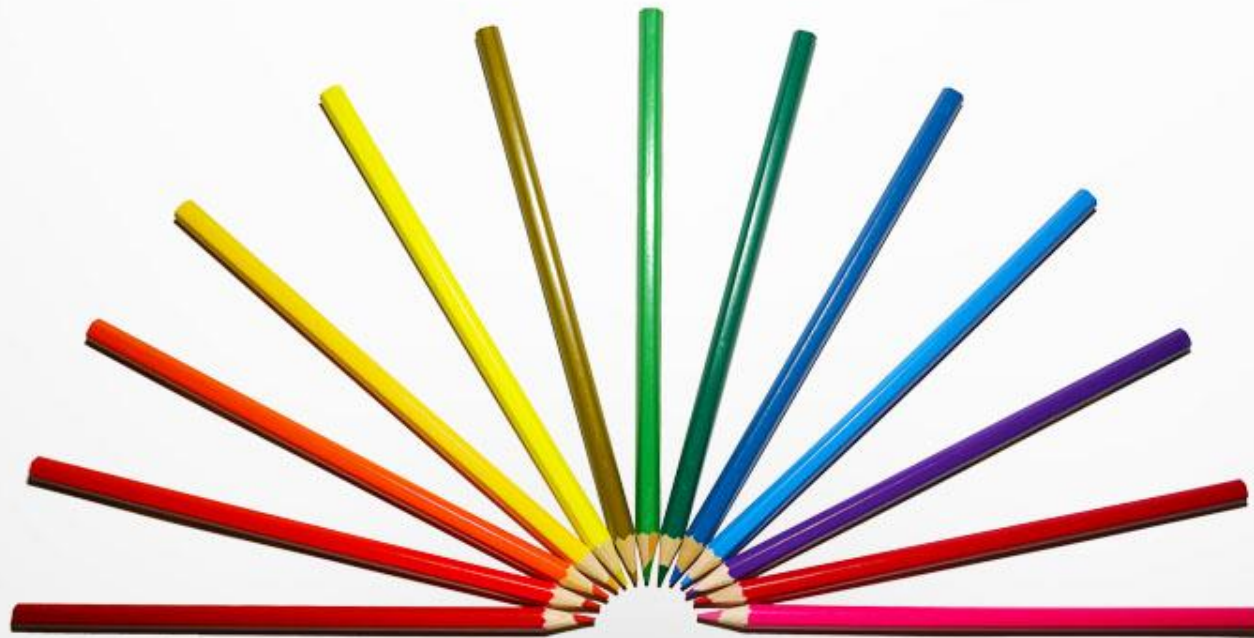
[Previously featured](#)

Recent Activity

[Turn Off](#) [Clear](#)

-  Educating clinicians about cultural competence and disparities in health and hea... PubMed
-  Patient Centeredness, Cultural Competence and Healthcare Quality
-  The Association of Academic Health Sciences Libraries Annual Statistics: a thema...

[See more...](#)



Careers

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Health Occupations

Also called: [Health careers](#), [Health professions](#), [Medical occupations](#), [Medical professions](#)

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- [Statistics](#)

For You

- [Children](#)



Get Health Occupations updates by email

Enter email address

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MEDICAL ENCYCLOPEDIA

Summary

Every day, around the clock, people who work in the health care industry provide care for millions of people, from newborns to the very ill. In fact, the health care industry is one of largest providers of jobs in the United States. Many health jobs are in hospitals. Others are in nursing homes, doctors' offices, dentists' offices, outpatient clinics and laboratories.

[URL](#) for Health Careers (MedlinePlus)

K-12

GAMES & QUIZZES

STUDENT RESOURCES

TEACHER'S DESK

HISTORY OF BLS

FAQs

Search K-12

GO

Classroom activities

**How do you spend your time?**

Students will learn how to create and interpret a pie chart displaying how they spend their time.

Overview ([PDF](#))Excel: Directions ([XLS](#)) Worksheet ([PDF](#))Print: Directions ([PDF](#)) Worksheet ([PDF](#))**Graphing Prices**

Students will learn how to graph changes in price levels of goods in this real-world graphing exercise.

Worksheet ([PDF](#))**The Price is Correct**

In this activity, students will learn about inflation and play a game to guess how the prices of common goods have changed over the past several years.

Worksheet ([PDF](#))**Choosing a Career**

Students will research careers from among the 580 occupations listed in the Occupational Outlook Handbook.

Worksheet ([PDF](#))**CPI Inflation Calculator**

\$
in
Has the same buying power as:

in

Inflation Calculator

Students will use the Inflation Calculator to learn how the buying power of the dollar has changed over the years.

[URL](#) for K-12 Games and Quizzes; [URL](#) for Student Resources;
[URL](#) for Teacher's Desk (Bureau of Labor Statistics)



Changing *the face* of Medicine

HOME

VISIT

PHYSICIANS

RESOURCES

ACTIVITIES

SHARE your STORY



Discover the many ways that women have influenced and enhanced the practice of medicine. The individuals featured here provide an intriguing glimpse of the broader community of women doctors who are making a difference. The National Library of Medicine is pleased to present this exhibition honoring the lives and accomplishments of these women in the hope of inspiring a new generation of medical pioneers.



Explore *the* Exhibition

► VISIT

This exhibition at the National Library of Medicine closed on November 19, 2005. Its traveling exhibition [itinerary](#) is available online. Please refer to "On Exhibit at NLM" on the [Library's home page](#) for information on the current exhibition on display at the Library.

► PHYSICIANS

Perform your own customized database [search](#) to learn about the woman physicians featured in this exhibition. Learn about their sources of inspiration, the challenges they faced, and their accomplishments.

► RESOURCES

Students, find out if a [career in medicine](#) is for you through the guide to medical career Web sites. Teachers, print classroom [lesson plans](#) and view an extensive [bibliography](#) including books and videos.

New Book! [Women Physicians and the Cultures of Medicine](#).

[URL](#) for Changing the Face of Medicine



Changing *the face*
of Medicine

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SHARE *your* STORY

Careers

Lesson Plans

Higher Education

Suggested Reading

* RESOURCES

The following resources have been assembled for students, teachers, and medical professionals to complement the exhibition.

* CAREERS

- ♦ Students and medical professionals—learn about steps you can take to join the field of medicine and to enhance your medical career. Explore links to Web sites that will provide you with all the information you need.

* LESSONS

- ♦ Teachers—bring the world of medicine into your classrooms. Lesson plans targeted for specific age groups within K-12 have been designed to enhance understanding of the physiology of the body and the field of medicine.

[URL](#) for Changing the Face of Medicine Resources

Haz-Map



Hazardous Agents



Occupational Diseases



High Risk Jobs



Non-Occupational Activities



Industries



Job Tasks



Processes



Symptoms/Findings

Haz-Map is an occupational health database designed for health and safety professionals and for consumers seeking information about the adverse effects of workplace exposures to chemical and biological agents.

[URL](#) for Haz-Map



Environmental Health

Indoor Air Pollution Ozone



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Summary

Ozone is a gas. It can be good or bad, depending on where it is. "Good" ozone occurs naturally about 10 to 30 miles above the Earth's surface. It shields us from the sun's ultraviolet rays. Part of the good ozone layer is gone. Man-made chemicals have destroyed it. Without enough good ozone, people may get too much ultraviolet radiation. This may increase the risk of skin cancer, cataracts, and immune system problems.

"Bad" ozone is at ground level. It forms when pollutants from cars, factories, and other sources react chemically with sunlight. It is the main ingredient in **smog**. It is usually worst in the summer. Breathing bad ozone can be harmful. It can cause coughing, throat irritation, worsening of **asthma**, **bronchitis**, and **emphysema**. It can lead to permanent lung damage, if you are regularly exposed to it.

Environmental Protection Agency

Start Here

- [Air Quality Guide for Ozone](#) (Environmental Protection Agency)
Available in [Spanish](#)
- [Ozone](#)  (National Institute of Environmental Health Sciences)
- [Ozone](#) ([Environmental Health Student Portal](#))  (National Library of Medicine)

Get Ozone updates by email 

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Related Health Topics

[Air Pollution](#)

National Institutes of Health

The primary NIH organization for research on **Ozone** is the [National Institute of Environmental Health Sciences](#)

MedlinePlus links to health information from the National Institutes of Health

Search MedlinePlus for the topic page names to locate resources

Learning and Teaching about the Environment

K-12 students and educators need access to quality homework resources, lesson plans and project ideas to learn and teach about the environment. [Environmental education \(EE\)](#) is a multi-disciplinary approach to learning about environmental issues that enhances knowledge, builds critical thinking skills and helps students make informed and responsible decisions.

Homework Help, Awards and Activities for K-12 Students



- [Homework resources](#)
- [Student awards and contests](#), including the President's Environmental Youth Award
- [Games, quizzes, and more](#)
- [Videos about the environment](#)

Additional Resources for Educators and Education Professionals

Classroom Resources and Project Ideas



- [Lesson plans, teacher guides and online resources for educators](#)
- [Community service project ideas](#)
- [Science fair project ideas](#)

Healthy Schools, Healthy Kids

News and Deadlines

- Congratulations to our latest [President's Environmental Youth Award](#) winners! Applications are now being accepted for the next cycle.
- Take a look at the newest [Campus RainWorks Challenge winners](#).

Find Local Resources

To find local resources or more information on inviting EPA staff to visit your school, talk to your [Regional Environmental Education Coordinator](#).

Order Materials

[URL](#) for Learning and Teaching about the Environment (EPA)

Environmental Health Student Portal



The Environmental Health Student Portal provides a safe and useful resource for students and teachers to learn how the environment can impact our health.

Suitable for grades 6-8

[URL](#) for Environmental Health Student Portal

Tox Town provides information on:

- Everyday locations where you might find toxic chemicals and how the environment can impact human health
- Non-technical descriptions of chemicals
- Available in English and Spanish



Suitable for grades 6-12+
[URL](#) for Tox Town & [Curriculum](#)

Tox Town Afterschool Club

Unit 1: Water Quality

Unit 2: Air Quality

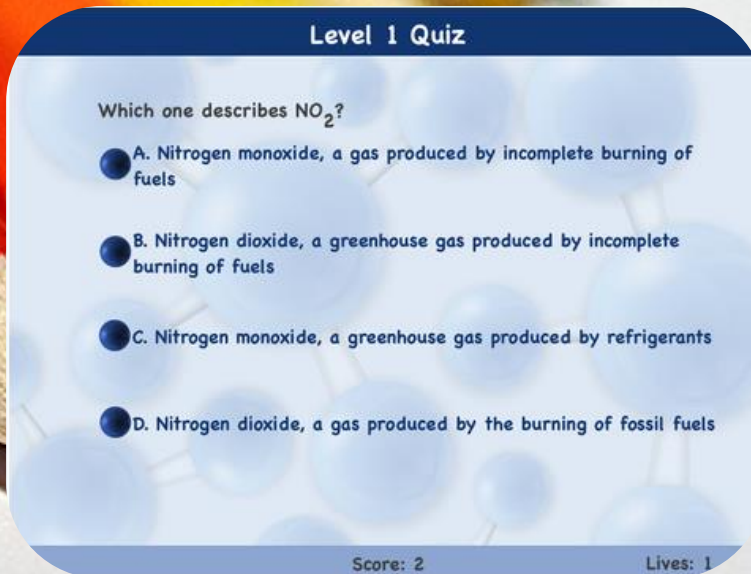
Unit 3: Chemicals in Your Home

Unit 4: Food Safety

Unit 5: Runoff, Impervious Surfaces, and Smart Development

Unit 6: The Great Debate: Bottled Water vs. Tap Water in Our Schools

[URL](#) for Tox Town-Based Curriculum Units



TOXinvaders game, by the National Library of Medicine (NLM), engages young adolescents in a fast-paced attack on toxic chemicals in the environment. The game supports middle school science concepts about environment and health.

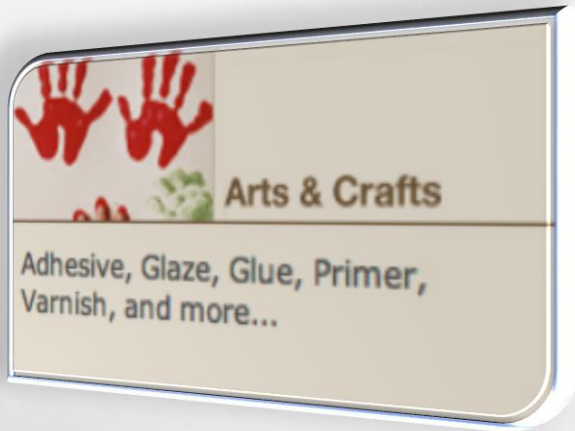
[URL](#) for TOXinvaders

Household Products Database (HPD)



Answers questions such as:

- What's under your kitchen sink, in your garage, in your bathroom, and on the shelves in your laundry room?
- Do these household products pose a potential health risk to you and your family?
- What are the chemical ingredients and their percentages in specific brands?
- Which products contain specific chemical ingredients?



Suitable for grades 6-12+

[URL](#) for HPD





Genetics

Genetics Home Reference

Contents Include

- Condition Summaries
 - Gene Summaries
- Gene Family Summaries
- Chromosome Summaries
 - Handbook
 - Glossary
- Resources



[URL](#) for Genetics Home Reference

[URL](#) for Handbook, Help Me Understand Genetics

Home

Topics

Labs &
Experiments

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Careers in
Genetics

Highlights

search...

GO



Cell Biology

The study of the cell, including mitosis and meiosis



DNA, Genes, Chromosomes

The building blocks of inheritance



Heredity/Inheritance Patterns

The genetic transmission of traits



Epigenetics/Inheritance and the Environment

The genome's dynamic response to the environment



Genetic Conditions

Conditions caused by gene variations or mutations



Evolution

Processes by which organisms are changed over time



Biostatistics

The use of mathematics to investigate life science related problems



Biotechnology

Biological techniques used to enhance products



DNA Forensics

The application of genetic testing for legal purposes



Top Issues In Genetics

Select genetic topics of popular interest



Suitable for grades 9-12

[URL](#) for GeneEd

HARRY POTTER'S WORLD

RENAISSANCE, SCIENCE, MAGIC, AND MEDICINE

[HOME](#)[EXHIBITION](#)[EDUCATION RESOURCES](#)[TRAVELING INFORMATION](#)[EXHIBITION](#)

“There was a lot more to magic,
as Harry quickly found out,
than waving your wand
and saying a few funny words.”

— *Harry Potter and the Philosopher's Stone*,
J. K. Rowling



Illustration of an owl
Konrad Gesner,
Historiae Animalium, 1551



EXHIBITION



EDUCATION RESOURCES



TRAVELING INFORMATION



HARRY POTTER'S WORLD

RENAISSANCE SCIENCE, MAGIC, AND MEDICINE

[HOME](#)[EXHIBITION](#)[EDUCATION RESOURCES](#)[TRAVELING INFORMATION](#)[EXHIBITION PROGRAM](#)[MIDDLE & HIGH SCHOOL](#)[HIGHER EDUCATION](#)[ONLINE ACTIVITIES](#)[BIBLIOGRAPHY](#)

Harry Potter's World presents the following instructional resources for the educators in middle- and high-schools, and in higher education institutions. The resources provide suggested instructional guides and materials that an educator may adapt in whole or in parts as he or she deems most appropriate for the students' interest, level, and academic goals.

Middle & High School Lesson Plans

- [Boggart and Fear in *Harry Potter*](#) and [Genetic Traits in *Harry Potter*](#) are two lesson plans prepared for middle- and high-school teachers. Each lesson plan contains background information and resources related to *Harry Potter* or academic topics, national standards, learning outcomes, step-by-step procedures, and all classroom materials.
- The lesson plans are developed in collaboration with Sahar Saddiqui and Annabella Kraut—English and Science teachers, respectively—at Charles E. Smith Jewish Day School in Rockville, Maryland.

Higher Education Module

- “[Things Most Strange and Wondrous](#)”, is a course module designed to introduce undergraduate and graduate students to the various magical and esoteric traditions that shaped past thinkers' conceptions of the study of nature in the Renaissance and early modern periods. Inspired by the National Library of Medicine's exhibition, [Harry Potter's World: Renaissance Science, Magic, and Medicine](#), which explores the history of science and medicine through the lens of the *Harry Potter* novels by J. K. Rowling, this module is prepared primarily for higher education instructors with a strong background in Renaissance and early modern intellectual and cultural history (spanning roughly 1450-1700 C.E.). Familiarity with the *Harry Potter* novels is neither assumed nor required, though it would be an advantage.
- This module is developed in collaboration with [Mark A. Waddell, Ph.D.](#), who currently teaches in the Lyman Briggs College of Science at Michigan State University.

Online Activities

- [Desire for Knowledge](#) and [Different Perspectives](#) are guided online activities that navigate parts of *Harry Potter's World* with a specific interpretive plan.

Bibliography

Elizabeth Bland, curator of the *Harry Potter's World* exhibition, provides a suggested reading list that can serve as a starting point for those who are interested in going beyond the *Harry Potter* novels

[URL](#) for Harry Potter's World Education Resources



NLM's Online Exhibitions

EXHIBITIONS

VIEW CATEGORIES BY:

[MOST RECENT](#)[ALPHABETICALLY](#)

find an exhibition near you

medicine & the arts



FRANKENSTEIN: Penetrating the
Secrets of Nature



AND THERE'S THE HUMOR OF IT:
Shakespeare and the Four Humors



THE LITERATURE OF PRESCRIPTION:
Charlotte Perkins Gilman and "The
Yellow Wallpaper"

[view more](#)[view all](#)

science & society



PICK YOUR POISON: Intoxicating
Pleasures & Medical Prescriptions



FROM DNA TO BEER: Harnessing
Nature in Medicine and Industry

AIDS
IT AIN'T OVER YET

SURVIVING AND THRIVING: AIDS,
Politics and Culture

[view more](#)[view all](#)

patients & practitioners



PICTURES OF NURSING: The
Zwergling Postcard Collection



THE HENKEL PHYSICIANS: A Family's
Life in Letters



HEALING THE NATION: Stories from
the Civil War

[view more](#)[view all](#)

the technology of medicine



VISIBLE PROOFS: Forensic Views of
the Body



THE ONCE AND FUTURE WEB: Worlds
Woven by Telegraph and Internet

"Health is a reflection of a society's commitment to
– Peoples' Health Movement, 2000



EXHIBIT

GUEST COLUMN

ONLINE ACT



Courtesy CEPRODE

DISASTER PREPARED

The Central American Disaster Information Network (CANDHI) provides the technology needed to access databases, publications, and online resources on disaster preparedness, and to connect to a web site that provides news, maps, local weather updates, and alerts.

[Click here to learn more](#)

GUEST COLUMN

Victor Cid is a computer science researcher at the National Library of Medicine.

[Read More](#)

◀ PREVIOUS TOPIC

NEXT TOPIC ▶

ONLINE ACTIVITIES & RESOURCES



Test your knowledge of the world of global health in online activities, and take this topic into the classroom with resources for students and teachers.

[View Games & Lessons](#)

DOWNLOADS

Hear more about global health topics from leaders and advocates featured in the exhibition.

[Get Downloads](#)

GET INVOLVED



Health and Human Rights Lesson Plan

Grade Level: 7-10 grades

Description: This lesson plan helps students explore the concept that health is a basic human right. Primary sources—Article 25 of the "U.N. Universal Declaration of Human Rights" and Article 1 of the "Declaration of Alma-Ata"—are used to help students define health and human rights, and to build a connection between the two. Students also play online games that highlight the countries and people whose stories are featured in the *Against the Odds* exhibition. The games and worksheets help students apply the concept of health as a basic human right in the context of the stories from the *Against the Odds* exhibition.

Learning Outcomes: Students will be able to:

- Analyze two historical documents and relate their content to real life situations.
- Use different graphic organizers to understand the relationship between health and human rights.
- Apply the concept of health as a basic human right in understanding past examples of health solutions.
- Identify at least one human rights issue that they are aware of and one action that they can take to address that issue.

Background Information:

- The United Nations General Assembly proclaimed the [Universal Declaration of Human Rights](#) on December 10, 1948. Article 25 of this declaration defines "a standard of living adequate for the health and well-being..." as a right for all.
- The International Conference on Primary Health Care was held in Alma-Ata, presently Kazakhstan, in September 1978. Representatives from 134 countries and 67 international organizations attended the conference. These attendees called for "urgent action by all governments, all health and development workers, and the world community to protect and promote the health of all the people of the world..." leading to the [Declaration of Alma-Ata](#). The declaration:
 1. affirms that health is a fundamental human right;
 2. defines that health is "a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity..."; and
 3. links health directly to socioeconomic and political conditions affecting individuals and communities worldwide.

Time Needed: Two 45-minute class periods

Materials:

- Flip chart and/or transparencies
- Markers
- Universal Declaration of Human Rights ([full document](#) or [short document with excerpts](#))
- Declaration of Alma-Ata ([full document](#) or [short document with excerpts](#))
- [Teacher's Notes on the Human Rights and Alma-Ata Declarations](#)
- [Health Graphic Organizer](#)
- [Health and Human Rights List](#)
- [Venn Diagram](#) (examples)
- [Teacher's Venn Diagram](#)
- [Game 1](#) & [Game 2](#) worksheets
- Teacher's Notes on [Games 1 and 2](#)
- Overhead projector and transparencies
- Access to computers and the Internet connection for a part of Lesson 2

EXPLORE



MORE EXHIBITIONS



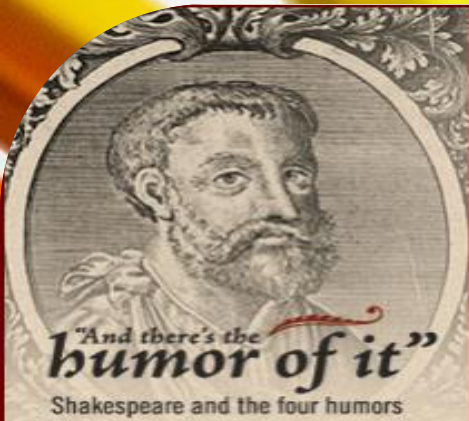
MORE EDUCATIONAL RESOURCES



<http://www.nlm.nih.gov/againsttheodds/>

Page 1

[URL](http://www.nlm.nih.gov/againsttheodds/) for Against the Odds Online Exhibition



Exhibition
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 Middle School
 High School
 Higher Education
 Additional Resources
Traveling Exhibition
Credits
Exhibition Program

Lesson Plans

High School

The Melancholy Dane

[Learning Outcomes](#) [Background Information](#) [Vocabulary](#) [Materials](#) [Class 1](#) [Class 2](#)
[Evaluations](#) [Extension Activities](#) [Standards](#)

Grade Level:

10–12

Time Needed:

two 40-minute class periods

Description:

Students deepen their analysis of Shakespeare's *Hamlet* by learning about and applying their knowledge of the four humors rooted in Greek Medicine and used during and beyond Shakespeare's time. In [Class 1](#), students use an excerpt from Shakespeare's *The Merry Wives of Windsor* to consider varying definitions of "humor" in the author's time. Students examine primary sources featured in the "And there's the humor of it" *Shakespeare and the four humors* exhibition to learn about the four humors and the humoral theory, as well as review dramatic structure. In [Class 2](#), students apply their knowledge about the melancholic humor in their character analysis and understanding of Hamlet as the "melancholy prince." Students identify text references to Hamlet's melancholy traits and assess the significance of his characterization for the play as a whole.

Students are expected to have read Shakespeare's *Hamlet*, and to be familiar with dramatic plot structure, specifically exposition and rising action.

Learning Outcomes: Students will be able to

- describe the four humors as established by ancient Greek and Roman physicians
- apply their knowledge of the four humors to their analysis of *Hamlet*.
- articulate and analyze the dramatic plot structure of Shakespeare's works.
- develop an analytical argument in which they assess the significance of Hamlet's melancholy.
- interpret primary sources of varying media types, including textual and visual.

[URL](#) for "And there's the humor if it" Online Exhibition

EDUCATION

Lesson Plans

Lesson Plans

- Primary Sources
- Then and Now

Higher Education Modules

Online Activities

Other Resources

GEORGE WASHINGTON: Primary Sources

grade level 5–8 | subject - history and social studies



George Washington and Primary Sources is prepared in connection with the study of U.S. history, specifically the Revolutionary War period and George Washington. Students define what primary and secondary sources are. They then use and analyze several primary and secondary sources from the online exhibition to learn about how George Washington worked to ensure the health and safety of others under his care—troops, as well as family, servants, and slaves living at his Mount Vernon estate.

GEORGE WASHINGTON AND MEDICINE: Then and Now

grade level 7–9 | subject - history and social studies, health education



George Washington and Medicine: Then and Now engages students in examining primary and secondary sources from the exhibition to learn about several health issues and treatments that George Washington dealt with in caring for those under his charge—troops, family, servants, and slaves. Students consider the knowledge and practice of medicine during the American Revolutionary and Early Republic eras. They investigate how those health issues are being understood and treated in our own time and present their findings in posters as well as in written essays.



LIFE AND LIMB

THE TOLL OF THE AMERICAN CIVIL WAR

LESSON PLANS

Middle School Lesson Plan ►

The U.S. Civil War: Wounded Soldiers, Disabled Veterans is prepared for 5-8 grade classes. In this lesson, students examine several primary sources related to the Civil War, including photos and illustrations. They also use four sections from the Life and Limb: The Toll of the Civil War exhibition to consider causes and effects of the war-time medical practices that shaped the experiences of wounded soldiers, and the changing attitudes toward disabled veterans after the war.

High School Lesson Plan ►

The U.S. Civil War: Living With Battlefield Injuries is designed for 9-12 grade classes. The lesson focuses on students' using primary sources and their transcripts in order to develop deeper understanding of short- and long-term impact of non-fatal Civil War casualties on Americans. Students first explore the Life and Limb exhibition as an introduction on the topic. They closely examine transcripts of several Civil War documents such as excerpts from a soldier's memoir, Senate Bill 173, poems of that era, and illustrations and photos of soldiers. Afterwards, students work in small groups and create political cartoons that reflect their understanding of the experiences and treatments of wounded and disabled soldiers during and after the war.



[URL](#) for Life and Limb

BINDING WOUNDS PUSHING BOUNDARIES

African Americans in Civil War Medicine

[HOME](#)[EXHIBITION](#)[EDUCATION](#)[TRAVELING INFORMATION](#)[CREDITS](#)[EXHIBITION PROGRAM](#)[Lesson Plans](#)[Higher Education](#)[Online Activities](#)[Additional Resources](#)

Lesson Plans

[Elementary School](#) | [High School](#)

High School Lesson Plan:

A Potent Remedy: African American Surgeons and Nurses of the Civil War Era

[Learning Outcomes](#)[Class 1](#)[Evaluations](#)[Background Information](#)[Class 2](#)[Extension Activities](#)[Vocabulary](#)[Class 3](#)[National Education Standards](#)[Materials](#)

Grade Level: 10-12

Time Needed: three 45-minute class periods

Description: Students view several primary sources and closely examine transcripts of the sources, featuring two Civil War African American surgeons and a nurse. In [Class 1](#), students assess and then build on their existing knowledge about African American doctors and nurses during the U.S. Civil War. In [Class 2](#) students share their findings from close examination of two primary sources from Class 1 and study the case of [Dr. Augusta's streetcar incident](#) in 1863 through several related primary sources, including a record of a congressional debate on the resolution to desegregate Washington, DC, streetcars. In [Class 3](#), students share their findings from the examination of the congressional record, and write a short essay about the contributions African Americans made to expanding the roles available to African Americans during the Civil War and to others' views of them and their roles in society.

[URL](#) for Binding Wounds Pushing Boundaries

Education

HOME • EXHIBITION • **EDUCATION** • CREDITS

TRAVELING INFO

Lesson Plans

- Activism and Healing
- Hawaiian Star Compass

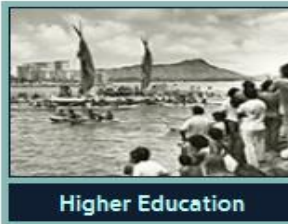
Higher Education

Online Activities

Other Resources



Lesson Plans



Higher Education



Online Activities



Other Resources

LESSON PLANS

ACTIVISM AND HEALING: Kanaloa Kaho'olawe, a Hawaiian Island grade level: 5–8 | subject—history and social studies

The lesson plan engages students in exploring *A Voyage to Health*. Students demonstrate their comprehension of the online exhibition by creating a class timeline that chronicles key events related to Kanaloa Kaho'olawe, one of the Hawaiian Islands. They then use the timeline as a case study in identifying causes and consequences of each event, as well as consider how the perspectives may differ among different groups. This timeline case study allows students to examine a wide range of issues, such as how interpretation of events is influenced by cultural perspectives, how historical events influence physical and human geography, how belief systems and government policies can conflict, and how citizen actions can influence public policy. The activities in this lesson plan can be used in a variety of social study areas, such as United States history, the regions and cultures of the United States, world geography and cultures, global and environmental issues, government, and civi-

[URL](#) for A Voyage to Health

FRANKENSTEIN:

PENETRATING the SECRETS of NATURE

EDUCATION

LESSON PLANS

HIGHER EDUCATION

ONLINE ACTIVITIES

OTHER RESOURCES

RELATED RESOURCES AT NLM

Frankenstein: Penetrating the Secrets of Nature presents the following classroom resources for K-12 and undergraduate educators and their students. The resources offer templates for incorporating the exhibition's scholarly content in order to help students learn by examining and analyzing primary- and secondary-source visual and textual materials. They promote students' consideration of science and society as a whole and develop historical perspectives on how scientific endeavors influence as well as are shaped by society and culture. Educators are welcome to adapt these resources in whole or in part as they deem appropriate for students' interests and learning goals.

LESSON PLANS



HIGHER EDUCATION



ONLINE ACTIVITIES



OTHER RESOURCES



LESSON PLANS

Electricity, Frankenstein, and the Spark of Life

grade level: 6–8 | subject: literature and science & technology

Students examine the references to electricity by reading short excerpts from Chapters 2 and 5 of the *Frankenstein* novel and by watching a four-minute clip of the 1931 film version of *Frankenstein*. They compare the two and identify how similarly or differently the novel and film depict the scientist and his knowledge and use of electricity in creating his monster. Students then learn about Luigi Galvani and Alessandro Volta, two scientists who experimented with and advanced the study and understanding of electricity during late 1700s.

Frankenstein's Science

grade level: 9–11 | subject: literature and science & technology

Students assess their assumption about what "Frankenstein" represents and compare them to what they learn from the original novel published in 1818 and the film from 1931. They explore the popular scientific works during the two

[URL](#) for Frankenstein: Penetrating the Secrets of Nature

FRANKENSTEIN:

PENETRATING the SECRETS of NATURE

LESSON PLANS

HIGHER EDUCATION

ONLINE ACTIVITIES

OTHER RESOURCES

RELATED RESOURCES AT NLM

EDUCATION

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LESSON PLANS



HIGHER EDUCATION



ONLINE ACTIVITIES



OTHER RESOURCES



LESSON PLANS

Electricity, Frankenstein, and the Spark of Life

grade level: 6–8 | subject: literature and science & technology

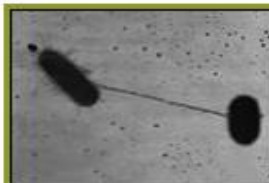
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[URL](#) for Frankenstein: Penetrating the Secrets of Nature

Education: Learn More

[HOME](#) • [EXHIBITION](#) • [EDUCATION](#) • [DIGITAL GALLERY](#) • [CREDITS](#)[TRAVELING INFO](#)

Lesson Plans

[Higher Education](#)[Online Activities](#)[Other Resources](#)[Related Resources at NLM](#)[Lesson Plans](#)[Higher Education](#)[Online Activities](#)[Other Resources](#)

LESSON PLANS

Acquired and Passive Immunity: Diphtheria Antitoxin Serum

Grade level: 7-9 | subject—science & technology

This lesson plan uses the “Living Factories” section of the *From DNA to Beer* site, so that students learn about how horses and other animals were used to develop and produce antitoxin serum in order to prevent children with diphtheria from dying of suffocation. Students learn about and define acquired and passive immunity in animals, as they explore the horse’s immune response to the diphtheria toxin injection and the horse’s antitoxin serum that could prevent death in diphtheria patients.

The lesson plan is developed in collaboration with Samantha Candia (Francis Scott Key Middle School, Silver Spring, MD), with contributions by the 2013 Teacher Institute Participants.

[URL](#) for From DNA to Beer



LESSON PLANS

HIGHER EDUCATION

ONLINE ACTIVITIES

OTHER RESOURCES

RELATED RESOURCES AT NLM

EDUCATION

Pictures of Nursing presents the following classroom resources for K-12 and undergraduate educators and their students. The resources offer examples of how the rich content and primary sources in the exhibition can be used to promote students' developing higher order thinking skills, in addition to expanding subject-area knowledge. Educators are welcome to adapt these resources in whole or in part as they deem appropriate for students' interests and learning goals.

LESSON PLANS



HIGHER EDUCATION



ONLINE ACTIVITIES



OTHER RESOURCES



LESSON PLANS

Visual Literacy: Images of Nurses and Nursing

grade level: 9–10 | subject: history and social studies

Students use four nursing postcards from the *Pictures of Nursing* website in order to develop and practice visual literacy skills. They examine the postcard images and critically evaluate how each image depicts, and even shapes, social perception of nurses and nursing. Students also consider them in historical and social context based on their observations of the images and prior knowledge. Working on the image analysis tasks, students specifically articulate their observations and inferences that support their analysis work.

[URL](#) for Pictures of Nursing

PICK YOUR POISON

INTOXICATING PLEASURES & MEDICAL PRESCRIPTIONS



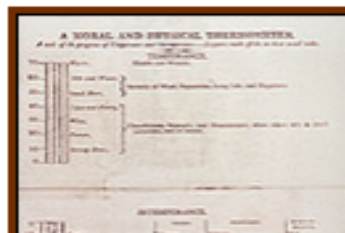
EXHIBITION
PROGRAM



Lesson Plans



Higher Education



Online Activities



Other Resources

LESSON PLANS

DRUG USE AND ABUSE: Past and Present

grade level: 10-12 | subject—health education, history and social studies

This lesson plan uses the historical case studies of five drugs—tobacco, alcohol, opiates, cocaine, and marijuana—featured in the online exhibition, *Pick Your Poison: Intoxicating Pleasures and Medical Prescriptions*. Students examine primary sources related to drug use and advertisement through 1800s and early 1900s, and identify three factors that influenced the use of those drug in the United States in the past. Students research contemporary information on the same drugs and compare their past use and current information that discourage young people from using/abusing the drugs. The lesson plan has been develop in collaboration with Lynn M. Wiegand who is a certified health education educator and school library media specialist in the Montgomery County, Maryland.

[URL](#) for Pick Your Poison

THE LITERATURE OF PRESCRIPTION

CHARLOTTE PERKINS GILMAN AND "THE YELLOW WALL-PAPER"



HOME

EXHIBITION

EDUCATION

TRAVELING INFORMATION

CREDITS



EXHIBITION



EDUCATION

[URL](#) for The Literature of Prescription



SURVIVING &THRIVING

AIDS, POLITICS, AND CULTURE


EDUCATION

[Lesson Plans](#)[Higher Education Modules](#)[Online Activities](#)[Other Resources](#)[Related Resources at NLM](#)

Surviving and Thriving: AIDS, Politics and Culture presents the following classroom resources for K-12 and undergraduate students and their teachers. The resources offer examples of how the rich content and primary sources in the exhibition can be used to promote students' developing content knowledge as well as higher order thinking skills. Educators are welcome to adapt these resources in whole or in part as they deem appropriate for students' interests and academic goals.

LESSON PLANS

Fight the fear with the facts.
Call 1 (800) 922-AIDS.



HIGHER EDUCATION MODULES



ONLINE ACTIVITIES



OTHER RESOURCES



[URL](#) for Surviving & Thriving

VISIBLE PROOFS

FORENSIC VIEWS
OF THE BODY



VISIT

EXHIBITION

GALLERIES

EDUCATION

RESOURCES

SUB SECTIONS

Online Activities

Medical Views

Anthropological Views

Technological Views

Lesson Plans

Measurable You!

Entomology in Action

DNA—a Molecular Identity

Education

Welcome to the *Visible Proofs* Education site. Explore several forensic topics through the online activities and lesson plans below.

Online Activities

Explore the following three online activities that will whet your appetite to learn more about various forensic developments, techniques, and careers!

1. [Medical Views](#) presents two medical examiners' perspectives on their work, first-hand experience in medico-legal autopsies, and something called Virtopsy. Explore the world of a medical examiner and consider a forensic pathology career for yourself!
2. [Anthropological Views](#) introduces forensic anthropologists and their work with human remains. Examine skeletal remains, a human rights case, and three anthropologists' perspectives on their work.
3. [Technological Views](#) offers insights into the scientific and technological advances that have extended the capabilities of forensic analysis. Examine historical developments in forensic identification, crime scene recording, DNA analysis, radiology, and toxicology, all of which are integral part of the forensic investigations of our time.

Lesson Plans

Teachers—bring the world of forensics into your classrooms. These lesson plans for middle and high school students have been developed to promote active learning while exploring the stories of the people, technologies, and sciences that have contributed to the development and invention of diverse forensic techniques.

[URL](#) for Visible Proofs



Additional Resources/Services

Images from the History of Medicine



Images from the History of Medicine (IHM) provides access to over 70,000 images dated from the 15th to the 21st century in the collections of the History of Medicine Division (HMD) of the U.S National Library of Medicine (NLM).

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[URL](#) for Images from the History of Medicine web site

Stay Connected with NN/LM MAR edit

- [Boost Box](#) - a monthly webinar to boost your knowledge of NLM products or other health information topics
- [Lunch with the RML](#) - a monthly webinar to share experiences and ideas with MAR staff and Network members
- [MAR-L Listserv](#) - Subscribe to weekly announcements to keep aware of breaking developments from NLM, funding opportunities, and other important information
- [The MARReport](#) - quarterly newsletter for the NN/LM Middle Atlantic Region
- [MARquee News Blog](#) - announcements, upcoming events, technology tips, etc.
- [Facebook](#) - "Like" us on the popular social networking site
- [Twitter](#) - Follow us on Twitter for information resources that you can use

(Add / Edit Text )

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Evaluating Online Resources edit

NLM and K-12 Professionals edit



Whether you work in a K-12 School, Community or Faith-Based Organization providing after school programming, NLM provides resources to help enrich your curriculum/program. The [National Library of Medicine \(NLM\)](#), the world's largest medical library and a component of the National Institutes of Health, produces a variety of web-based resources for use by K-12 health and science educators.

Educators are welcome to review and use the modules or lesson plans, in whole or in-part, for their students' interests, levels and academic goals. These [resources](#) are designed to engage students' interest in and foster their analysis of a variety of health and science related topics.

Locate online resources in the following topics:

[General Health and Biology](#)

[Forensics and Medical Technology](#)

[Genetics](#)

[Environmental Health and Chemistry](#)

[Careers in Health Professions](#)

[Health Resources for Teens](#)

To request training on NLM resources for K-12 Professionals contact

[Remove Profile Boxes from Page](#)

NN/LM MAR Consumer Health Coordinator



Lydia Collins

Contact Info

NN/LM MAR
 Health Sciences Library System
 University of Pittsburgh
 200 Scaife Hall
 3550 Terrace Street
 Pittsburgh, PA 15261
 412.624.1411
[Send Email](#)

Links:

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Subjects:

[Consumer Health](#)

MedlinePlus Magazine edit



[URL](#) for K-12 Professionals Resource Guide

[NN/LM MAR Training](#)

NN/LM MAR
 Training & Educational
 Opportunities



NN/LM MAR staff provide no-cost training session on health information resources, with an emphasis on free resources from the National Library of Medicine. Locate information about upcoming trainings and see past offerings.

- [NN/LM MAR Training & Educational Opportunities](#)
- [NN/LM MAR and the National Training Center upcoming courses](#)
 View all upcoming courses offered by NN/LM MAR Coordinators and the National Training Center (NTC).
- [NN/LM MAR Current Class Offerings Descriptions](#)
 View NN/LM MAR class descriptions (LibGuide) for classes that are currently being offered.

[Welcome to NN/LM MAR Information for Public Libraries](#)



The National Library of Medicine ([NLM](#)) Provides freely available resources on a variety of topics for use by Public Libraries to use in their communities. Locate resources by subject using the information compiled by the Consumer Health Coordinator at the National Network of Libraries of Medicine, Middle Atlantic Region ([NN/LM MAR](#)).

[Highlighted Resources by Population/Topic:](#)

[Adult/General/Senior Health](#)

[Health Resources for Teens](#)

[NLM's K-12 Resources](#)

[Consumer Health](#)

[Finding Health and Wellness @ the Library: A Consumer Health Toolkit for Library Staff 2nd edition](#)

[Affordable Care Act Information](#)

[Health Resources in Multiple Languages](#)

If you have any questions or would like training on the resources listed, please contact NN/LM MAR via e-mail, nnlmmar@pitt.edu or via telephone (800) 338-7657.

[NN/LM MAR Consumer Health Coordinator](#)



Lydia Collins

[Contact Info](#)

NN/LM MAR
 Health Sciences Library System
 University of Pittsburgh
 200 Scaife Hall
 3550 Terrace Street
 Pittsburgh, PA 15261
 412.624.1411
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[MedlinePlus Magazine](#)

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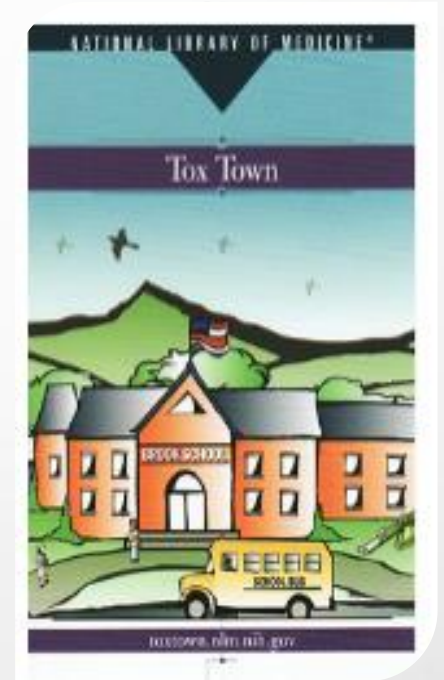
Spanish available also

[URL](#) for MedlinePlus Magazine
[URL](#) to order in bulk



NLM Educational & Printed Materials

If you are an NN/LM network member you may order educational and printed materials online from your regional NN/LM office.





[URL](#) for Ordering Materials from NN/LM MAR (DE, NJ, NY & PA)

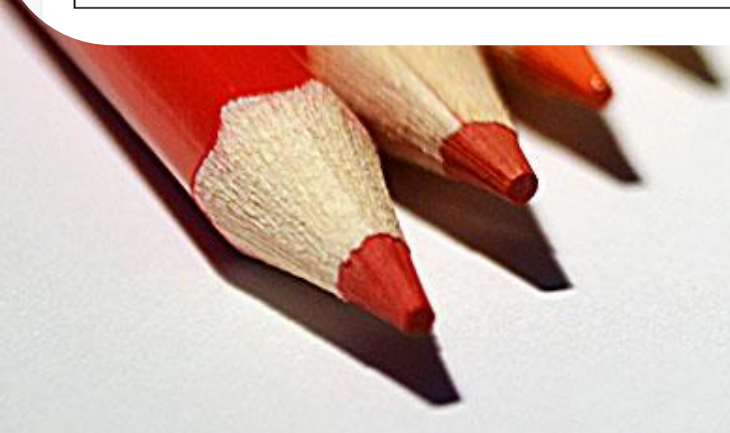


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Membership Benefit Comparison

Benefits	Full Members	Affiliate Members
Eligibility for award funding for health information access and other projects	X	X
Training and educational opportunities for librarians, health professionals, and consumers	X	X
Opportunities to partner with other health sciences libraries or health-related information centers	X	X
Obtain educational and printed materials for NLM posters, brochures, bookmarks, and other publications	X	X
Opportunities to request an NLM Traveling Exhibition  to visit your library or organization	X	X
Opportunities to provide input on regional NN/LM programs and services	X	X
A certificate recognizing your institution, library or organization as a NN/LM member	X	X
Access to DOCLINE  , the interlibrary loan system used by health sciences libraries	X	



Members of the National Network of Libraries of Medicine (NN/LM) provide health professionals and the general public with health information resources and services.

[URL](#) for NN/LM MAR Membership (DE, NJ, NY & PA)

[URL](#) for NN/LM to locate your Regional Medical Library for membership information

Thank You



Lydia N Collins

Consumer Health Coordinator

LYDIA@PITT.EDU



[URL](#) for NN/LM MAR

This project has been funded in whole or in part with Federal funds from the National Library of Medicine, National Institutes of Health, Department of Health and Human Services, under Contract No. HHS-N-276-2011-00003-C with the University of Pittsburgh, Health Sciences Library System.